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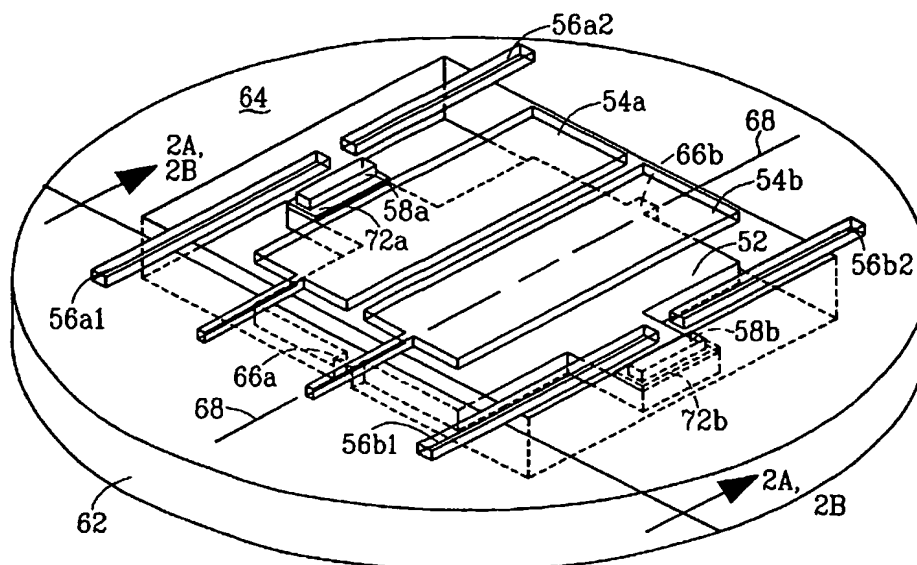
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(54) Title: SEALED INTEGRAL MEMS SWITCH



(57) Abstract: A MEMS switch includes a micro-machined monolithic layer (122) having, a seesaw (52), a pair of torsion bars (66a, 66b), and a frame (64). The frame (64) supports the seesaw (52) for rotation about an axis (68) established by the torsion bars (66a, 66b). Shorting bars (58a, 58b) at ends of the seesaw (52) connect across pairs of switch contacts (56a1, 56a2, 56b1, 56b2) carried on a substrate (174) bonded to one surface of the layer (122). A base (104) is also joined to a surface of the layer (122) opposite the substrate (174). The substrate (174) carries electrodes (54a, 54b) for applying forces to the seesaw (52) urging it to rotate about the axis (68). An electrical contact island (152) supported at a free end of a cantilever (166) ensures good electrical conduction between ground plates (162a, 162b) on the layer (122) and electrical conductors on the substrate (174).

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H01P 1/10
US CL : 333/262

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 333/262

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
East, EPO, JPO, Derwent

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MEMs, Mircoelectro, switch

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,278,368 A (KASANO et al.) 11 January 1994 (11.01.1994), figures 6-8 and 16.	1-5,13,14
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Y		10-12

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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